REMARKS

As an initial matter, Applicants gratefully acknowledge withdrawal of rejections under 35 USC 112, second paragraph; 35 USC 102 and 103 as provided on pg. 2 of the instant Office Action.

Claims 1 and 5 have been amended to recite a specific probe embodiment in which the probe comprises a single recognition element (claim 1) or single probe ligand (claim 5). Claims 58-61 have been amended to correct dependency.

New claims 236 and 237 have been added to recite a specific probe embodiment in which the recognition element is conjugated through the coupling element to a location ***at least one nucleotide*** inside the first hybridized duplex region of the first object or first complement sequence. New claim 236 and 237 are the same as claims 1 and 5, respectively, prior to the instant amendment of those claims, except that new claims 236 and 237 have the language "at least one nucleotide" added to part c) therein.

Support for the amendments can be found throughout the specification including the Drawings and claims as filed originally.

For example, particular support for reciting one recognition element in the claims can be found at pg. 34, lines 7-10. According to the specification at pg. 16, lines 3-6, a probe ligand refers to a particular recognition element.

Support for new claims 236 and 237 can also be found throughout the specification including the Drawings and claims as filed originally (particularly claims 1 and 5).

Specific support for the addition of the phrase "at least one nucleotide" in each of new claims 236 and 237 can be found in Figures 1 and 2 in which the recognition element (or the probe ligand) is shown conjugated to a nucleotide other than the terminally located nucleotide, i.e., to a location *at least one nucleotide* inside the first

hybridized duplex region of the first object or first complement sequence. More particular support can be found throughout the Examples. Specific probe embodiments having the recognition element conjugated to a location 1, 2, 3, 4, 5, 6, 7, 9, 10, and 12 nucleotides inside the first hybridized duplex region of the first object or first complement sequence are disclosed. For instance, the probe sequence as set forth in SEQ ID NO: 149 used in Example 13 comprises a first object (or first complement) sequence that has the recognition element conjugated to the second nucleotide from the 5' end of the first object (or first complement) sequence, i.e., to a location one nucleotide inside the first hybridized duplex region. Also, the probe sequence as set forth in SEQ ID NO: 138 used in Example 11, for instance, comprises a first object (or first complement) sequence that has the recognition element conjugated to a location two nucleotides inside from the 5' end of the first object (or first complement) sequence. Among the many different probe embodiments presented in the Examples, specific probe embodiments having the recognition element conjugated to a location 3, 4, 5, 6, 7, 9, 10, and 12 nucleotides inside the first hybridized duplex region of the first object or first complement sequence (either from the 5' or 3' end) can be found, for example, in SEQ ID NOS: 127 (Example 3), 123 (Example 1), 128 (Example 3), 137 (Example 10), 155 (Example 20), 125 (Example 2), 158 (Example 19), and 136 (Example 9), respectively.

No new matter has been added by virtue of the addition of new claims 236 and 237 or by amendments made to the claims.

On pg. 21 of the Action, the Office cited the Tyagi et al. patent in formulating an obviousness rejection based on the Lannigan and Kolesar patents. Applicants have assumed that was an inadvertent oversight by the Office and have responded to the rejection without reference to the Tyagi patent.

Information Disclosure Statement (IDS)

Applicants wish to cite European Application No. EP 0 851 228 A1 which document claims priority to WO 97/47968. The '228 patent application was cited in co-pending Japaense patent application No. 2004-542913. The '968 international patent

application has been considered by the Examiner in the IDS submitted on November 27, 2009.

Claim Rejection under 35 USC §112, second paragraph (indefiniteness)

Claims 58-61 stand rejected as being indefinite. While Applicants respectfully disagree, it is believed the rejection has been addressed by this submission.

In view thereof, reconsideration and withdrawal of the rejection are requested.

Claim Rejection under 35 USC §102(b)

Claims 1, 4-5, 7-9, 58, 60, 90-91, 228, 231-232, 234-235 stand rejected as being anticipated by Lannigan et al. (USP 6,399,302). While Applicants respectfully disagree with the stated reasons for making the rejection, bases for it has been addressed by this submission.

In particular, the Office took the view Lannigan teaches a probe with the formula F1-X-A-L-B-Y-F2 in which A and B represent aptamers that bind to a target analyte. Office Action at pg. 4. According to the Office, the patent teaches "at least one recognition element conjugated to the first object and first complement sequences". Office Action at pg. 4.

In contrast, claim 1 now features a probe with a *single recognition element*. Independent claim 5 has been amended along similar lines. Accordingly, the invention of claims 1, 4-5, 7-9, 58, 60, 90-91, 228, 231-232, 234-235 is distinct from the probe of the Lannigan reference as relied on.

In view thereof, reconsideration and withdrawal of the anticipation rejection over the Lannigan patent are requested.

Claim Rejection under 35 USC §103(a)

Claims 2-3, 106-108, 117, 131-135, 157-159 stand rejected as being unpatentable over Lannigan (US Pat. 6,399,302) in view of Jayasena et al. (US Pat. Application No. 2001/0055773). Applicants respectfully disagree particularly in view of the present submission.

According to the Office, Lannigan teaches a probe with the formula F1-X-A-L-B-Y-F2 in which A and B represent aptamers that bind to a target analyte. Office Action at pg. 10. As cited, the patent teaches "at least one recognition element conjugated to the first object and first complement sequences". Office Action at pg. 10 .The deficiencies of Lannigan has been discussed above. The invention of claim 1 (from which the rejected claims depend) now features *a single recognition element*. There is no suggestion or teaching in Lannigan as cited to make and use such a probe having only a single recognition element. Moreover, there is no suggestion or teaching in Jayasena as cited to make and use such a probe taken individually or together with Lannigan as relied on.

In view thereof, reconsideration and withdrawal of the rejection are requested.

Claim Rejection under 35 USC §103(a)

Claims 6, 59, 61 and 229 stand rejected as being unpatentable over Lannigan (US Pat. 6,399,302) in view of Tyagi et al et al. (US Pat. No. 5,925,517). Applicants respectfully disagree particularly in view of the present submission.

According to the Office, Lannigan teaches a probe with the formula F1-X-A-L-B-Y-F2 in which A and B represent aptamers that bind to a target analyte. Office Action at pg. 15. As cited, the patent teaches "at least one recognition element conjugated to the first object and first complement sequences". Office Action at pg. 15 .The deficiencies of Lannigan has already been pointed out above. The invention of claims 1 and 5 (from which the rejected claims depend (as amended)) now feature *a single recognition element*. There is no suggestion or teaching in Lannigan as cited to make and use such a probe having only a single recognition element. Moreover, there is no suggestion or

teaching in Tyagi as cited to make and use such a probe taken individually or together with Lannigan as relied on.

In view thereof, reconsideration and withdrawal of the rejection are requested.

Claim Rejection under 35 USC §103(a)

Claims 82-89 stand rejected as being unpatentable over Lannigan (US Pat. 6,399,302) in view of Kolesar et al et al. (US Pat. No 6,261,781). Applicants respectfully disagree particularly in view of the present submission.

According to the Office, Lannigan teaches a probe with the formula F1-X-A-L-B-Y-F2 in which A and B represent aptamers that bind to a target analyte. Office Action at pgs. 18-19. As cited, the patent teaches "at least one recognition element conjugated to the first object and first complement sequences". Office Action at pgs. 18-19, bridging paragraph. The deficiencies of Lannigan has already been pointed out above. The invention of claim 1 (from which the rejected claims depend) now feature *a single recognition element*. There is no suggestion or teaching in Lannigan as cited to make and use such a probe having only a single recognition element. Moreover, there is no suggestion or teaching in Kolesar as cited to make and use such a probe taken individually or together with Lannigan as relied on.

In view thereof, reconsideration and withdrawal of the rejection are requested.

New Claims 236 and 237

Applicant has considered new claims 236 and 237 in light of the Lannigan (US Pat. No. 6,399,302), Kolesar (US Pat. No. 6,261,781) and Jayasena et al. (US Pat. Application No. 2001/0055773) patents as relied on by the Office. None of the cited references taken individually or together provide any specific teaching or a probe with a recognition element (or probe ligand) is conjugated though a coupling element at least

one nucleotide inside a first hybridized duplex region of a first object or first complement sequence. Allowance of these claims is requested.

CONCLUSIONS

Early and favorable consideration of the instant application is earnestly requested. Although it is believed that no additional fee is needed to consider this submission (other than the fee submitted along with the Petition For Extension of Time), the Office is hereby authorized to charge our deposit account no. 04-1105 for such fee.

Respectfully submitted,

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